The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-18 (canceled)

19. (currently amended) A compound of formula (I)

$$O = \begin{bmatrix} R_2 \\ \vdots \\ R_5 \end{bmatrix}$$

$$R_5$$

 R_1 is H or NH_2 ;

R₂ is optionally substituted aryl or heteroaryl attached via a carbon atom;

 R_3 is H; optionally substituted C_1 - C_6 alkyl, C_1 - C_6 alkenyl, C_2 - C_6 alkynyl, or C_3 - C_7 cycloalkyl, halogen; OH or OR_{10} ;

R₄ is H, optionally substituted C₁-C₆ alkyl, C₃-C₆ alkenyl, C₃-C₆ alkynyl, C₃-C₇ cycloalkyl, aryl or heteroaryl,

 R_5 is H or optionally substituted C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_1 - C_6 alkynyl, or C_3 - C_7 cycloalkyl; or R_4 and R_5 together form a 5 or 6-membered heterocyclic ring;

 R_{10} is optionally substituted C_1 - C_6 alkyl;

or a pharmaceutically acceptable salt or prodrug thereof PROVIDED THAT: (a) R_2 is not an optionally substituted pyrazolopyridine ring system; and (b) when R_1 and R_3 are hydrogen and R_2 is unsubstituted phenyl then $-NR_4R_5$ is not $-NH_2$, $NHCH_3$ or $N(CH_3)_2$; and (c) when R_1 is $-NH_2$ and R_3 is hydrogen, then R_2 is not phenyl or phenyl substituted by one or more substituents selected from halogen, hydroxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, nitro, -- NH_2 , or $-NHCOCH_3$.

20. (original) A compound as claimed in claim 19 wherein R₁ is -NH₂ and R₃ is hydrogen, and

R₂ is substituted phenyl, the substituent(s) in the phenyl being selected from, methylenedioxy, C₁-C₆ alkylthio, trifluoromethyl, trifluoromethoxy, nitrile (-CN), oxo, COR^A, CONHR^A, --CONR^AR^B, --NHR^A, NR^AR^B, --NHCOR^C, --NHCOOR^A, --NR^BCOOR^A wherein R^A and R^B are independently a C₁-C₆ alkyl group and wherein R^C is a C₂-C₆ alkyl group.

Claims 21-22 (canceled)

23. (original) A pharmaceutical composition comprising a compound as claimed in claim 19 in combination with a pharmaceutically acceptable carrier or excipients.

Claims 24-41 (canceled)

- 42. (New) A compound as claimed in claim 19 wherein the compound is selected from the group consisting of:
- 2-Amino-N-(2-fluorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3,4-difluorophenyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3methoxybenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N, N-dimethylpyrimidine-4-carboxamide;
- 1-(2-Amino-6-(2-furyl) pyrimidin-4-ylcarbonyl) piperidine;
- 2-Amino-6-(2-furyl)-N-(2-methoxybenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-furylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(4-dimethylaminobenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-(dimethylaminocarbonyl)benzyl) pyrimidine-4-carboxamide; 2-

Amino-6-(2-furyl)-N-(2-pyridylmethyl) pyrimidine-4-carboxamide;

- 2-Amino-6-(2-furyl)-N-(4-pyridylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-methylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-trifluoromethylbenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;

- 2-Amino-N-(lH-benzimidazol-2-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-pyridylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-methylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3,6-dimethylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-(2-thienyl) thiazol-4-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-thienylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(5-(2-pyridyl)-2-thienylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(5-methyl-2-trifluoromethylfuran-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(5-methylisoxazol-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-methoxy-6-methylpyridin-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-fluoro[1,3]benzodioxin-8-ylmethyl)-6-(2-furyl) pyrimidine-4- carboxamide;
- 2-Amino-6-(2-furyl)-N-(6-methylpyridin-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-indolylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(6-hydroxymethylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(1-methyl-1H-imidazol-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(5-H-indolylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2,3-dimethylindol-5-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-methyl-4-nitrobenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-methyl-N-(2-(2-pyridyl)ethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-methylindol-5-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-benzyl-6-(2-furyl) pyrimidine-4-carboxamide;
- N-Allyl-2-amino-6-(2-furyl) pyrimidine-4-carboxamide;
- (R)-2-Amino-6-(2-furyl)-N-(2-hydroxypropyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(6-indolylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(quinolin-8-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-(pyridin-2-yl)ethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-chlorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;

- 2-Amino-N-([2,1,3]benzothiadiazol-5-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(isoquinolin-3-ylmethyl) pyrimidine-4-carboxamide;
- 1-(2-Amino-6-(2-furyl)pyrimidin-4-ylcarbonyl)-4-(2-pyridyl) piperazine;
- 2-Amino-6-(2-furyl)-N-(quinolin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(benzothiazol-2-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- (S)-2-Amino-6-(2-furyl)-N-(1-phenylethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(4-chlorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(4-fluorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- (R)-2-Amino-6-(2-furyl)-N-(1-phenylethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(4-methoxybenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(cyanomethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(4-methylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(1-phenylprop-1-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-fluorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-chlorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-methylphenyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-methylpyridin-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-phenylpropyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(4-amino-3-methylbenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-benzyl-6-(2-furyl)-N-methylpyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(5-methylpyrazin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(lH-imidazol-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(l-n-propyl-lH-imidazol-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-bromobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-bromopyridin-2-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-aminopyridin-2-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-furyl)-N-(3-(lH-imidazol-1-yl) propyl) pyrimidine-4-carboxamide;
- 2-Amino-N (1-ethyl-1H-imidazol-2-ylmethyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-dimethylamino-6-methylpyridin-3-ylmethyl)-6-(2-furyl) pyrimidine-4-

carboxamide;

- (R)-Methyl-2-(6-(2-amino-6-(2-furyl) pyrimidine-4-carboxamido)) phenylacetate;
- (S)-Methyl-2-(6-(2-amino-6-(2-furyl) pyrimidine-4-carboxamido)) phenylacetate;
- 2-Amino-N-(2, 6-dichlorobenzyl)-6-(2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-methylpyridin-2-ylmethyl)-6-(thiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-n-propylpyridin-2-ylmethyl)-6-(thiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(2-pyridylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(1-methyl-1H-pyrrol-2-ylmethyl) pyrimidine-4- carboxamide;
- 2-Amino-5-bromo-6-(5-methyl-2-furyl)-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-methylbenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-methylbenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(4-methylbenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-chlorobenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-chlorobenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(3-pyridylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(4-pyridylmethyl) pyrimidine-4-carboxamide:
- 2-Amino-N-(2-methoxybenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-methoxybenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-fluorobenzyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(3-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-hydroxymethylpyridin-2-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,5-dimethyl-1H-pyrazol-3-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(5-methylisoxazol-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(2-phenylethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(3-phenylpropyl) pyrimidine-4-carboxamide;

- 2-Amino-N-benzyl-N-ethyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- (R, S)-2-Amino-6-(5-methyl-2-furyl)-N-(1-phenylpropyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,5-dimethyl-lH-pyrrol-2-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- (R, S)-2-Amino-6-(5-methyl-2-furyl)-N-(1-phenylethyl) pyrimidine-4-carboxamide;
- (S)-2-Amino-N-methyl-6-(5-methyl-2-furyl)-N-(1-phenylethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(1-phenylprop-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-isobutyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-hexyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-butyl-N-methyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-methyl-6-(5-methyl-2-furyl)-N-pentylpyrimidine-4-carboxamide;
- 2-Amino-N-benzyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-phenylpyrimidine-4-carboxamide;
- 2-Amino-N-benzyl-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(1-methyl-1H-pyrazol-5-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1-methyl-lH-pyrazol-5-ylmethyl-6-(4-methylthiazol-2-yl) pyrimidine-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,5-dimethyl-lH-pyrazol-3-ylmethyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(1-methyl-1H-pyrazol-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1-methyl-1H-pyrazol-3-ylmethyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide:
- N-(1,5-Dimethyl-lH-pyrazol-3-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 6-(5-Methyl-2-furyl)-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- N-Benzyl-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 6- (5-Methyl-2-furyl)-N-(2-pyridylmethyl) pyrimidine-4-carboxamide;
- N-(3, 6-Dimethylpyridin-2-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,3-dimethyl-lH-pyrazol-5-ylmethyl)-6-(5-methyl-2-furyl) pyrimidine-4-

carboxamide;

- 2-Amino-N-(1,3-dimethyl-lH-pyrazol-5-ylmethyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(6-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(5-methyl-2-furyl)-N-(l-methyl-lH-pyrazol-4-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(pyrimidin-4-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(4-methylthiazol-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,5-dimethyl-lH-pyrazol-4-ylmethyl-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(1,3-dimethyl-lH-pyrazol-4-ylmethyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(pyridin-3-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylthiazol-2-yl)-N-(3-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-N-(2-methylbenzyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-methoxybenzyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-methylbenzyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-fluorobenzyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(3-chlorobenzyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-N-(6-methylpyridin-2-ylmethyl)-6-(4-methylthiazol-2-yl) pyrimidine-4-carboxamide;
- 2-Amino-6-phenyl-N-(2-trifluoromethylbenzyl) pyrimidine-4-carboxamide;
- 2-Amino-6-phenyl-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-methylphenyl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylphenyl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(3-cyanophenyl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(2-methylphenyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(3-methylphenyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(4-methylphenyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(3-cyanophenyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(3-methylphenyl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;

- 2-Amino-6-(3-methoxyphenyl)-N-(pyridin-2-ylmethyl) pyrimidine-4-carboxamide;
- 2-Amino-6-(3-methoxyphenyl)-N-(3-methylpyridin-2-ylmethyl) pyrimidine-4-carboxamide; and
- 2-Amino-N-(3-methylpyridin-2-ylmethyl)-6-phenylpyrimidine-4-carboxamide.